



General

Guideline Title

Occupational therapy practice guidelines for home modifications.

Bibliographic Source(s)

Siebert C, Smallfield S, Stark S. Occupational therapy practice guidelines for home modifications. Bethesda (MD): American Occupational Therapy Association, Inc. (AOTA); 2014. 109 p. [133 references]

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Note from the National Guideline Clearinghouse: In addition to the evidence-based recommendations below, the guideline includes extensive information on the evaluation process and intervention strategies for home modifications.

Definitions for the strength of recommendations (A–D, I) and levels of evidence (I–V) are provided at the end of the "Major Recommendations" field.

Recommendations for Occupational Therapy Interventions for Home Modifications

Home Modifications to Prevent Falls

- Multicomponent interventions (home modifications and other fall prevention interventions) that include occupational therapy to reduce falls (A)
- Single-component intervention (home modification) including occupational therapy to prevent falls (A)
- Multicomponent interventions not including occupational therapy to prevent falls (I)

Home Modifications to Improve Functional Performance

- Home modification interventions to improve function in frail older adults (A)
- Home modification interventions to improve function for older adults aging with physical disabilities (C)
- Home modification interventions at discharge for postoperative hip repair (C)
- Home modification interventions for people with low vision to improve quality of life (C)

- Intensive, tailored home modification interventions to improve functional performance for community-dwelling people with schizophrenia (C)

Caregiving

- Home modification interventions to improve the ability to provide care to others in the home, especially those with dementia (A)
- Home modification interventions to improve the functional ability of care recipients in the home setting (A)
- Home modification interventions to reduce caregiver upset for people aging with dementia (C)

Note: Criteria for level of evidence and recommendations (A, B, C, I, D) are based on standard language (Agency for Healthcare Research and Quality, 2012). Suggested recommendations are based on the available evidence and content experts' clinical expertise regarding the value of using the intervention in practice.

Definitions:

Levels of Evidence for Occupational Therapy Outcomes Research

Evidence Level	Definitions
I	Systematic reviews, meta-analyses, randomized controlled trials
II	Two groups, nonrandomized studies (e.g., cohort, case control)
III	One group, nonrandomized (e.g., before and after, pretest and posttest)
IV	Descriptive studies that include analysis of outcomes (e.g., single-subject design, case series)
V	Case reports and expert opinion that include narrative literature reviews and consensus statements

Note: Adapted from "Evidence-based medicine: What it is and what it isn't." D. L. Sackett, W. M. Rosenberg, J. A. Muir Gray, R. B. Haynes, & W. S. Richardson, 1996, *British Medical Journal*, 312, pp. 71-72. Copyright © 1996 by the British Medical Association. Adapted with permission.

Strength of Recommendations

A—There is strong evidence that occupational therapy practitioners should routinely provide the intervention to eligible clients. Good evidence was found that the intervention improves important outcomes and concludes that benefits substantially outweigh harm.

B—There is moderate evidence that occupational therapy practitioners should routinely provide the intervention to eligible clients. There is high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial.

C—There is weak evidence that the intervention can improve outcomes. It is recommended that the intervention be provided selectively on the basis of professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.

I—There is insufficient evidence to determine whether or not occupational therapy practitioners should be routinely providing the intervention. Evidence that the intervention is effective is lacking, of poor quality, or conflicting and the balance of benefits and harm cannot be determined.

D—It is recommended that occupational therapy practitioners not provide the intervention to eligible clients. At least fair evidence was found that the intervention is ineffective or that harm outweighs benefits.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Any disease or condition that results in:

- Impairments in a broad range of functional areas that include behavioral, cognitive, and physical functioning
- Acute temporary to chronic progressive disease processes

Guideline Category

Counseling

Evaluation

Management

Prevention

Clinical Specialty

Family Practice

Geriatrics

Neurology

Nursing

Physical Medicine and Rehabilitation

Preventive Medicine

Psychiatry

Psychology

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Health Care Providers

Health Plans

Managed Care Organizations

Nurses

Occupational Therapists

Patients

Physical Therapists

Physician Assistants

Physicians

Public Health Departments

Social Workers

Guideline Objective(s)

- To provide an overview of the occupational therapy process for providing home modification interventions
- To define the occupational therapy domain and process and interventions that occur within the boundaries of acceptable practice
- To help occupational therapists and occupational therapy assistants, as well as those who manage, reimburse, or set policy regarding occupational therapy services, understand the contribution of occupational therapy for home modification interventions
- To serve as a reference for health care professionals, health care facility managers, education and health care regulators, third-party payers, and managed care organizations

Target Population

Adults in need of home modifications, including:

- People with impairments in a broad range of functional areas that include behavioral, cognitive, and physical functioning
- People with acute temporary to chronic progressive disease processes

Interventions and Practices Considered

Home modifications

Major Outcomes Considered

- Fall risk reduction
- Functional performance
- Quality of life
- Caregiving burden

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

One focused question served as the basis for the systematic review: What is the evidence for the effectiveness of home modification interventions within the scope of occupational therapy for adults and older adults to participate in areas of occupation in the home and community?

Search terms for the reviews were developed by the methodology consultant to the American Occupational Therapy Association, Inc. (AOTA) Evidence-Based Practice Project (EBP) and AOTA staff in consultation with the review author and reviewed by the advisory group. The search terms were developed not only to capture pertinent articles but also to make sure that the terms relevant to the specific thesaurus of each database were included. Table C2 in the original guideline document lists the search terms related to the population and intervention included in the systematic review. A medical research librarian with experience in completing systematic review searches conducted all searches and confirmed

and improved the search strategies.

Databases and sites searched included MEDLINE, PsycINFO, CINAHL, AgeLine, OTseeker, and Scopus. In addition, consolidated information sources, such as the Cochrane Database of Systematic Reviews, were included in the search. These databases are peer-reviewed summaries of journal articles and provide a system for clinicians and scientists to conduct evidence-based reviews of selected clinical questions and topics. Moreover, reference lists from articles included in the systematic reviews were examined for potential articles, and selected journals were hand searched to ensure that all appropriate articles were included.

Inclusion and exclusion criteria are critical to the systematic review process because they provide the structure for the quality, type, and years of publication of the literature incorporated into a review. The systematic review was limited to peer-reviewed scientific literature published in English. The intervention approaches examined were within the scope of practice of occupational therapy. The literature included in the review was published between 1990 and July 2011 and included study participants ages 18 years or older with health conditions that affected function. Studies included in the review are Levels I, II, and III evidence. The review excluded data from presentations, conference proceedings, non-peer-reviewed research literature, dissertations, and theses.

A total of 6,762 citations and abstracts were included in the review. The first author of this practice guideline completed the first step of eliminating references on the basis of citation and abstract. The systematic review was carried out as academic partnerships in which an academic faculty member worked with two graduate students. The review teams completed the next step of eliminating references on the basis of citations and abstracts. The full-text versions of potential articles were retrieved, and the review team determined final inclusion in the review on the basis of predetermined inclusion and exclusion criteria.

Number of Source Documents

A total of 35 articles were included in the final review. The review included 26 Level I studies, 3 Level II studies, and 6 Level III studies.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Levels of Evidence for Occupational Therapy Outcomes Research

Evidence Level	Definitions
I	Systematic reviews, meta-analyses, randomized controlled trials
II	Two groups, nonrandomized studies (e.g., cohort, case control)
III	One group, nonrandomized (e.g., before and after, pretest and posttest)
IV	Descriptive studies that include analysis of outcomes (e.g., single-subject design, case series)
V	Case reports and expert opinion that include narrative literature reviews and consensus statements

Note: Adapted from "Evidence-based medicine: What it is and what it isn't." D. L. Sackett, W. M. Rosenberg, J. A. Muir Gray, R. B. Haynes, & W. S. Richardson, 1996, *British Medical Journal*, 312, pp. 71-72. Copyright © 1996 by the British Medical Association. Adapted with permission.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

The teams working on the focused question reviewed the articles according to their quality (scientific rigor and lack of bias) and levels of evidence. Each article included in the review was then abstracted using an evidence table that provides a summary of the methods and findings of the article and an appraisal of the strengths and weaknesses of the study on the basis of design and methodology. American Occupational Therapy Association Inc. (AOTA) staff and the Evidence-Based Practice (EBP) Project consultant reviewed the evidence table to ensure quality control. All studies are summarized in full in the evidence table in Appendix D in the original guideline document.

Limitations of the studies incorporated into the review may include small sample sizes, lack of blinding, a high rate of attrition, and limited details on the intervention provided in a given study. Also, in a multicomponent treatment intervention, it is difficult to separate the role of home modification. In several studies there is lack of a control group and lack of randomization. In addition, contamination may have taken place in several studies, as a similar intervention may have been inadvertently provided to the control group.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

A major focus of American Occupational Therapy Association (AOTA)'s Evidence-Based Practice (EBP) projects is an ongoing program of systematic review of multidisciplinary scientific literature, using focused questions and standardized procedures to identify practice-relevant evidence and discuss its implications for practice, education, and research. An evidence-based perspective is founded on the assumption that scientific evidence of the effectiveness of occupational therapy intervention can be judged to be more or less strong and valid according to a hierarchy of research designs, an assessment of the quality of the research, or both. AOTA uses standards of evidence modeled on those developed in evidence-based medicine. This model standardizes and ranks the value of scientific evidence for biomedical practice using the grading system based on the work of Sackett et al. (1996) and presented in the "Rating Scheme for the Strength of the Evidence" field of this summary. In this system, the highest level of evidence, Level I, includes systematic reviews of the literature, meta-analyses, and randomized controlled trials (RCTs). In RCTs, participants are randomly allocated to either an intervention or a control group, and the outcomes of both groups are compared. Other levels of evidence include Level II studies, in which assignment to a treatment or a control group is not randomized (cohort study); Level III studies, which do not have a control group; Level IV studies, which use a single-case experimental design, sometimes reported over several participants; and Level V studies, which are case reports and expert opinion that include narrative literature reviews and consensus statements.

The systematic review of home modifications was supported by AOTA as part of the EBP Project. AOTA is committed to supporting the role of occupational therapy in this area of practice on the basis of the importance to older adults of aging in place and an interest in updating the Occupational Therapy Practice Guidelines for Home Modification (Siebert, 2005). The systematic review was also developed on basis of the need for occupational therapy practitioners to have access to the results of the latest and best available literature to support intervention within the scope of occupational therapy practice.

One focused question served as the basis for the systematic review: What is the evidence for the effectiveness of home modification interventions within the scope of occupational therapy for adults and older adults to participate in areas of occupation in the home and community? This question was reviewed by the review author, an advisory group of experts in the field, AOTA staff, and the methodology consultant to the AOTA EBP Project. The areas of occupation include activities of daily living (ADLs), instrumental activities of daily living (IADLs), work, education, leisure, and social participation.

Rating Scheme for the Strength of the Recommendations

Strength of Recommendations

A—There is strong evidence that occupational therapy practitioners should routinely provide the intervention to eligible clients. Good evidence was found that the intervention improves important outcomes and concludes that benefits substantially outweigh harm.

B—There is moderate evidence that occupational therapy practitioners should routinely provide the intervention to eligible clients. There is high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial.

C—There is weak evidence that the intervention can improve outcomes. It is recommended that the intervention be provided selectively on the basis

of professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.

I—There is insufficient evidence to determine whether or not occupational therapy practitioners should be routinely providing the intervention. Evidence that the intervention is effective is lacking, of poor quality, or conflicting and the balance of benefits and harm cannot be determined.

D—It is recommended that occupational therapy practitioners not provide the intervention to eligible clients. At least fair evidence was found that the intervention is ineffective or that harm outweighs benefits.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Peer Review

Description of Method of Guideline Validation

Not stated

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

These guidelines may be used to assist:

- Occupational therapists and occupational therapy assistants in communicating about their services to external audiences
- Community partners, physicians, other health care practitioners, case managers, families and caregivers, and health care facility managers in determining whether referral for occupational therapy services would be appropriate
- Third-party payers in determining the medical necessity for occupational therapy
- Legislators, third-party payers, and administrators in understanding the professional education, training, and skills of occupational therapists and occupational therapy assistants
- Health and education planning teams in determining the need for occupational therapy
- Program developers, administrators, legislators, and third-party payers in understanding the scope of occupational therapy services
- Program evaluators and policy analysts in this practice area in determining outcome measures for analyzing the effectiveness of occupational therapy intervention
- Policy, education, and health care benefit analysts in understanding the appropriateness of occupational therapy services for home modifications
- Policymakers, legislators, and organizations in understanding the contribution occupational therapy can make to program development and health care reform for home modifications
- Occupational therapy educators in designing appropriate curricula that incorporate the role of occupational therapy in the area of home modifications
- Consumers of occupational therapy services to better understand the depth and breadth of knowledge and services available in the area of home modifications

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

- This guideline does not discuss all possible methods of care, and although it does recommend some specific methods of care, occupational therapists make a professional determination regarding the appropriateness of a given intervention in light of a specific person's circumstances and needs as well as the evidence available to support the intervention. The final decision about modifications is made in conjunction with the client.
- This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold or distributed with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional person should be sought.
- It is the objective of the American Occupational Therapy Association to be a forum for free expression and interchange of ideas. The opinions expressed by the contributors to this work are their own and not necessarily those of the American Occupational Therapy Association.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

Resources

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Siebert C, Smallfield S, Stark S. Occupational therapy practice guidelines for home modifications. Bethesda (MD): American Occupational Therapy Association, Inc. (AOTA); 2014. 109 p. [133 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2014

Guideline Developer(s)

American Occupational Therapy Association, Inc. - Professional Association

Source(s) of Funding

American Occupational Therapy Association, Inc.

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Authors: Carol Siebert, MS, OTR/L, FAOTA, Principal, The Home Remedy, Chapel Hill (North Carolina); Stacy Smallfield, DrOT, MSOT, OTR/L, Associate Professor, Department of Occupational Therapy, University of South Dakota, Vermillion; Susy Stark, PhD, OTR/L, FAOTA, Assistant Professor of Occupational Therapy, Neurology and Social Work, Washington University in St. Louis, St. Louis

Issue Editor: Marian Arbesman, PhD, OTR/L, President, ArbesIdeas, Inc., Consultant, AOTA Evidence-Based Practice Project, Clinical Assistant Professor, Department of Rehabilitation Science, State University of New York at Buffalo

Series Editor: Deborah Lieberman, MHSA, OTR/L, FAOTA, Director, Evidence-Based Practice Staff Liaison to the Commission on Practice American Occupational Therapy Association, Bethesda, MD

Financial Disclosures/Conflicts of Interest

The authors of this Practice Guideline have signed a Conflict of Interest statement indicating that they have no conflicts that would bear on this work.

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Electronic copies: Not available at this time.

Print copies: Available for purchase from The American Occupational Therapy Association (AOTA), Inc., 4720 Montgomery Lane, Bethesda, MD 20814, Phone: 1-877-404-AOTA (2682), TDD: 800-377-8555, Fax: 301-652-7711. This guideline can also be ordered online at the [AOTA Web site](#) .

Availability of Companion Documents

The following are available:

- Occupational therapy practice framework: domain and process. 3rd ed. 2014. Available to order from the [American Occupational Therapy Association \(AOTA\) Web site](#) .
- Home modifications and occupational therapy. Fact sheet. Bethesda (MD): American Occupational Therapy Association, Inc. (AOTA); 2011. 2 p. Electronic copies: Available from the [AOTA Web site](#) .
- Home modifications promote independent living. Productive aging. Bethesda (MD): American Occupational Therapy Association, Inc. (AOTA). Electronic copies: Available from the [AOTA Web site](#) .

In addition, case studies are available in the original guideline document.

Patient Resources

The following is available:

- Occupational therapy in home modification. Video. Bethesda (MD): American Occupational Therapy Association, Inc. (AOTA); 2014. Electronic copies: Available from the [American Occupational Therapy Association \(AOTA\) Web site](#) .

Additionally, tip sheets on various topics for aging adults are available from the [AOTA Web site](#) .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI Institute on October 10, 2014.

Copyright Statement

This NGC summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions.

Disclaimer

NGC Disclaimer

The National Guideline Clearinghouse[®] (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion-criteria.aspx>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.